Quick Builds: What Are They and How Can They Transform Your Streets?

February 15, 2024

Presented to:

TRANSPORTATION BONANZA

Presented by:

Sam Schwartz
A TYLin Company

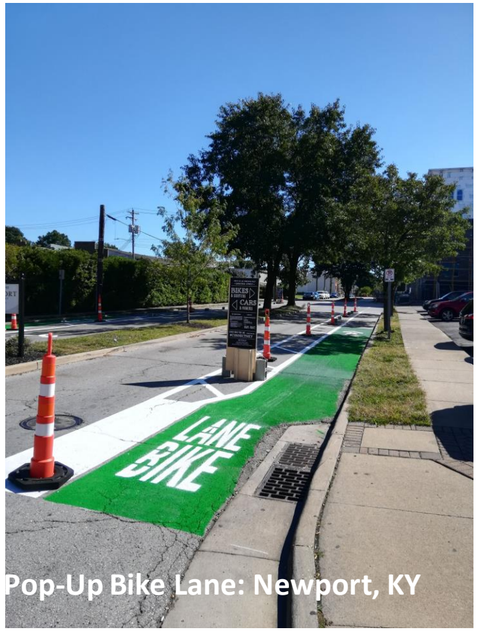
Quick Builds Have Gone International


Temporary Cycleway: Auckland


Pop-Up Bike Lane: Santo Domingo

Pop-Up Bike Lane: Berlin

Slow Streets: Oakland, CA



Pop-Up Bike Lane: Newport, KY


Shared Road: Cebu

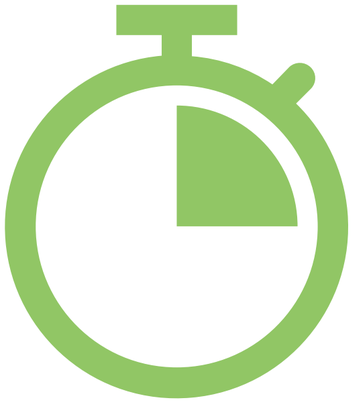
What Goals Can Quick Builds Achieve?

Vision Zero – Systemic and Corridor Safety Enhancements

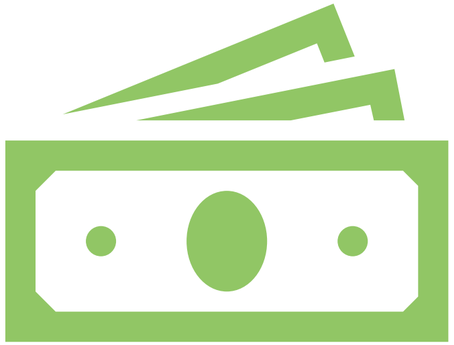
All Ages and Abilities Networks – Expansions, Closing Gaps, and Upgrades

Place Activations – Plazas, Parklets, and Art

Why Choose Quick Builds?



Rapid Installation



Lower Cost

Demonstration Opportunity

Unique Benefits

Can I Use Quick Builds?

Eligible for SS4A, SRTS/TAP, Public Health Funding

Implementable through Pavement Marking/Resurfacing Projects

Utilize Standard Materials

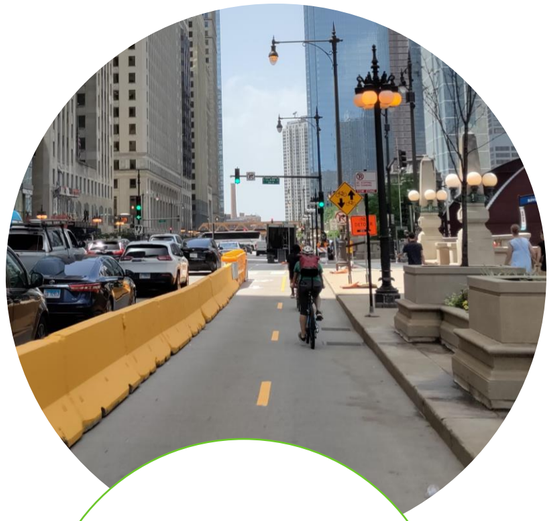
Enabled in the 11th Edition of the MUTCD

Incorporate FHWA Proven Safety Countermeasures

Quick Build Toolkit

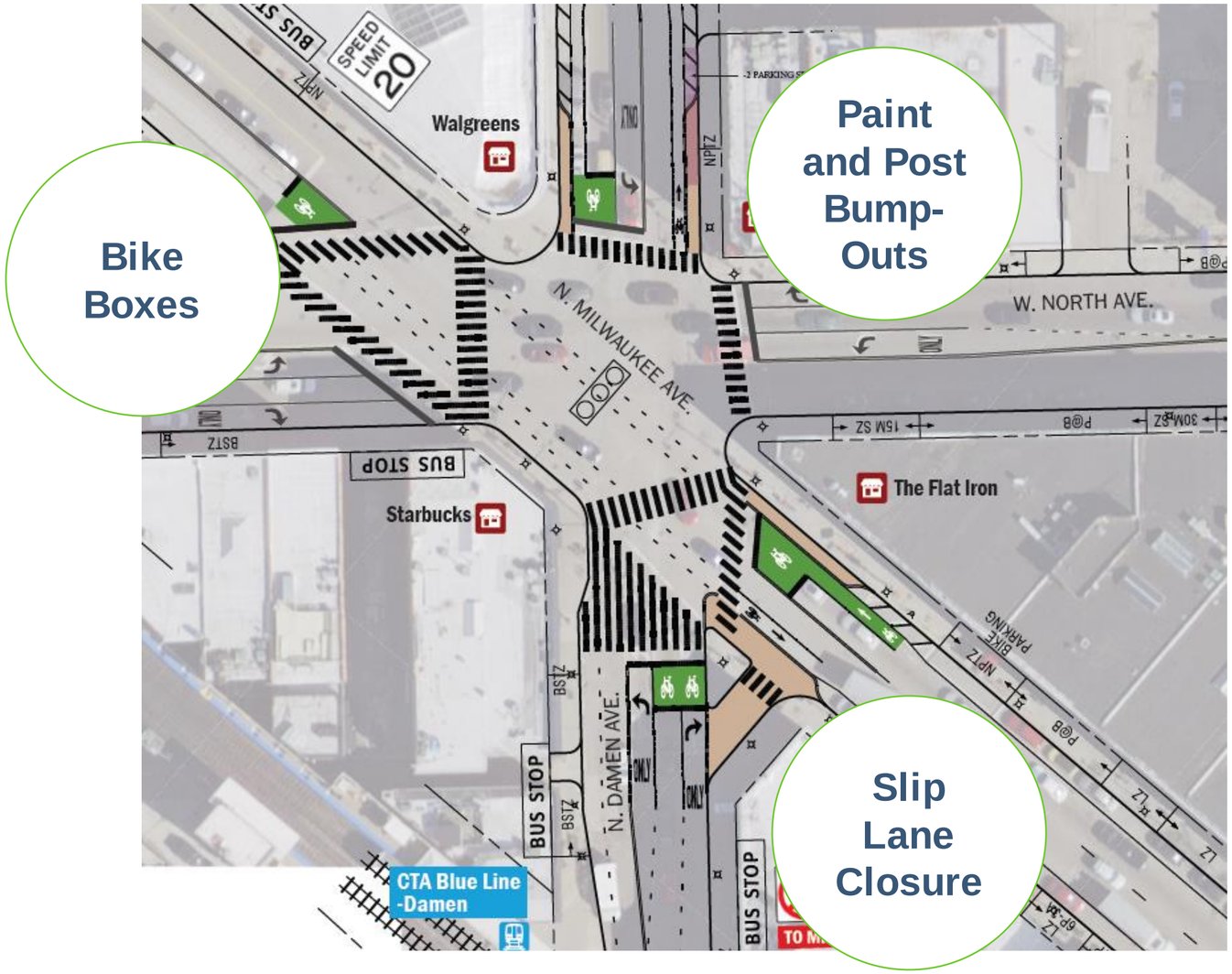
Pavement Markings

Vertical Delineation



Physical Protection

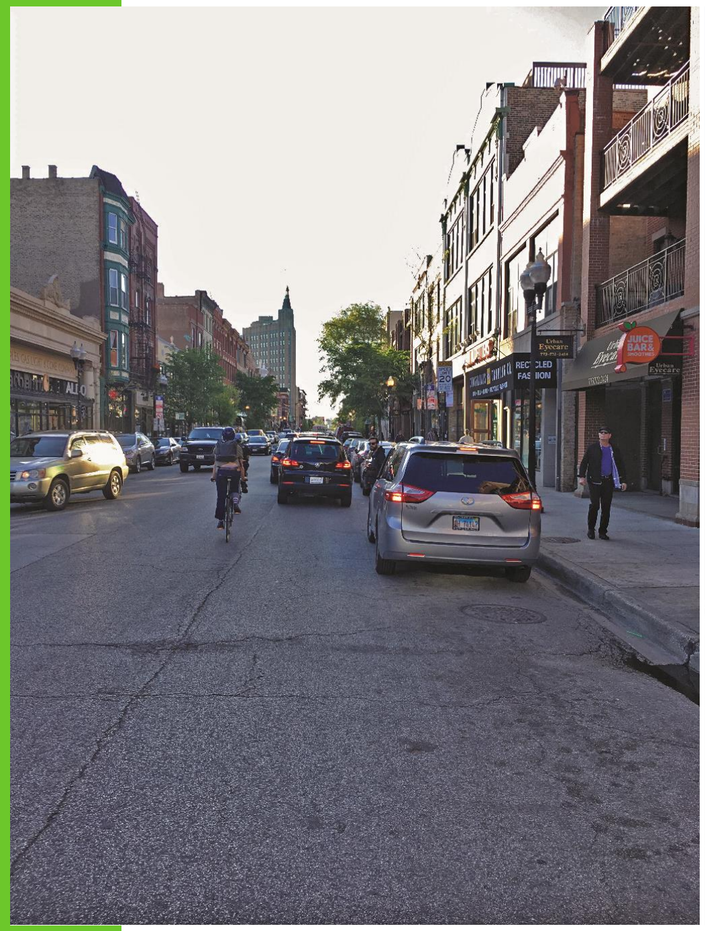
Quick Builds in Practice: Milwaukee Avenue, Chicago, IL



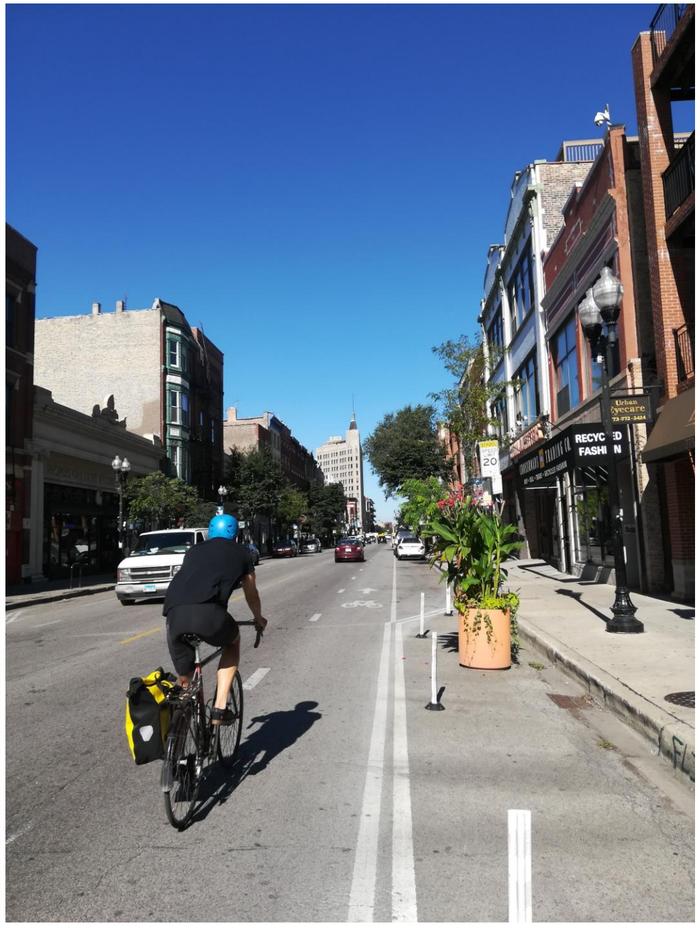
43% fewer people driving over 30 mph

52% fewer people biking in door zone

42% fewer people failing to stop for pedestrians in uncontrolled crosswalks



BEFORE



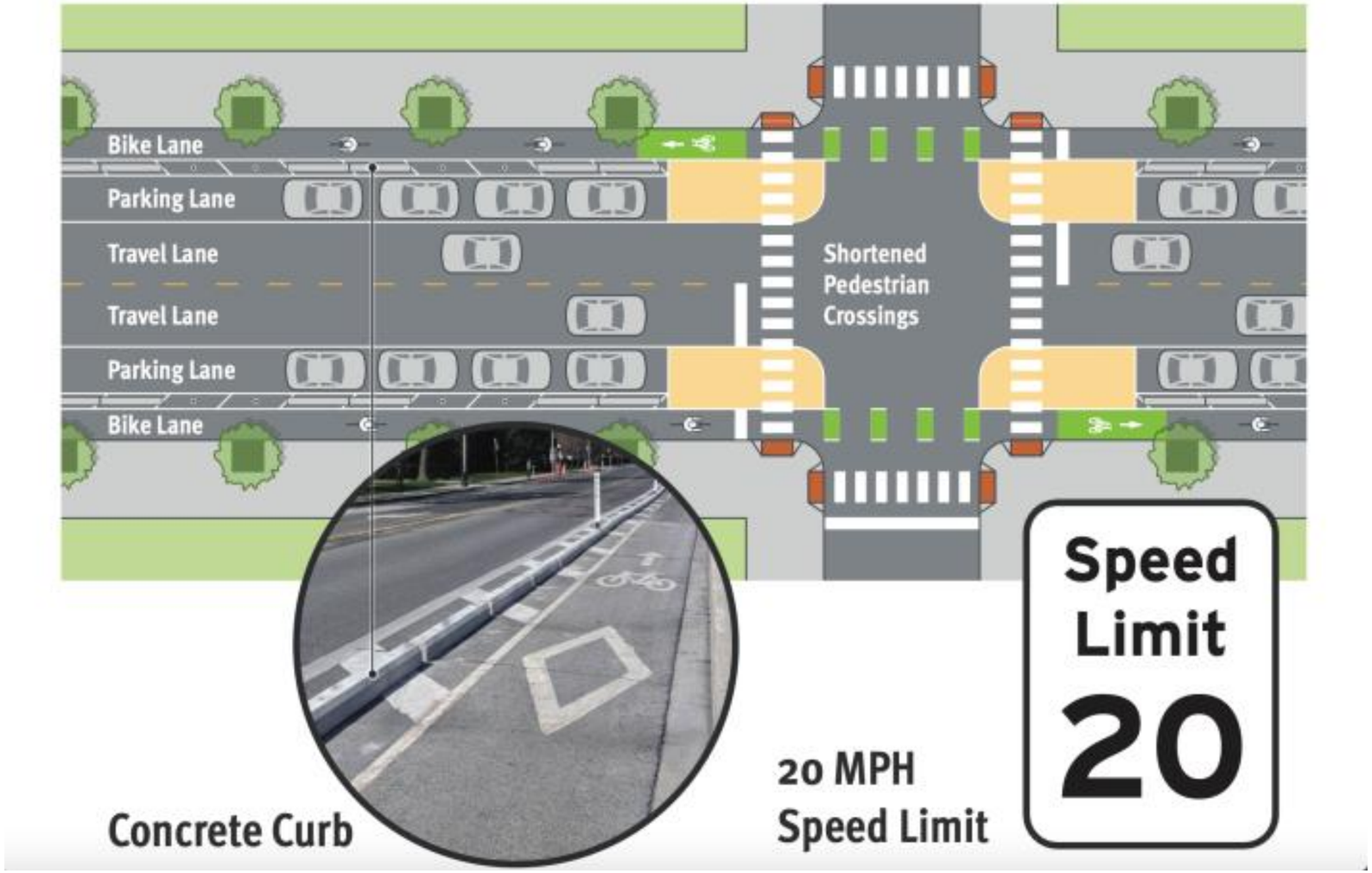
AFTER


2017


2018


2021

Quick Builds in Practice: Augusta Blvd, Chicago, IL



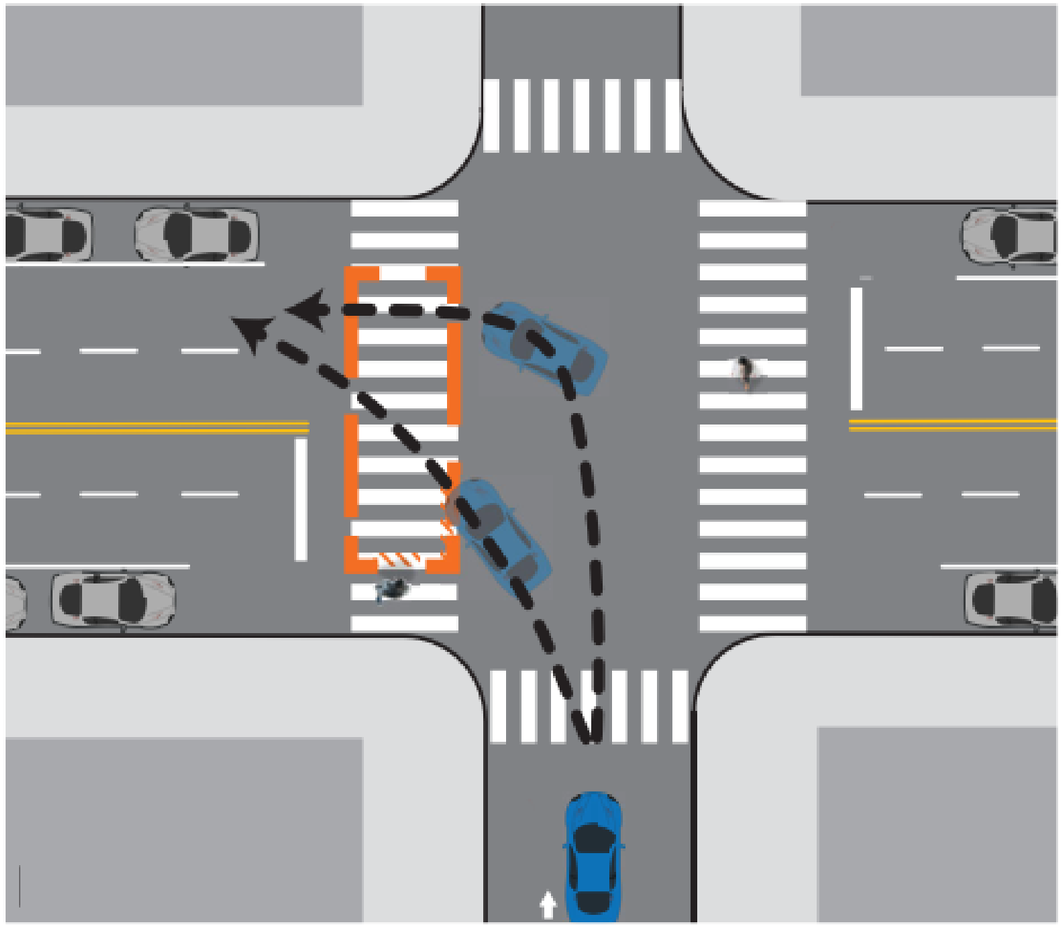
35% decrease in people driving over 30 mph

29% increase in people driver slower than 20 mph

BEFORE

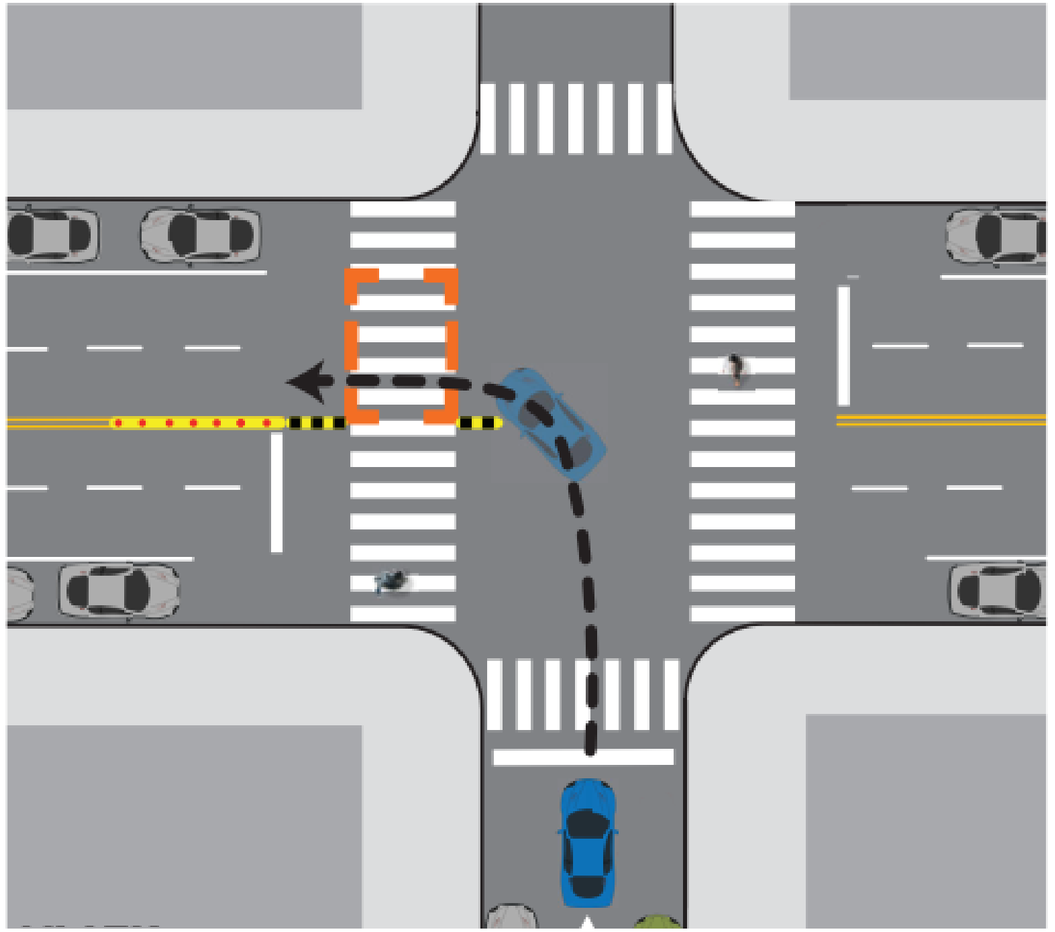
AFTER

Expanding the Tool Box: Left Turn Traffic Calming



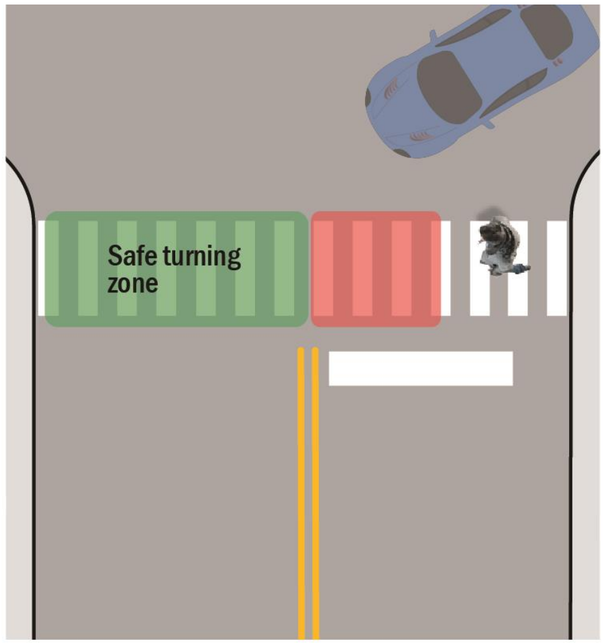
BEFORE

Pedestrian Conflict Zone



AFTER

Why Install Left Turn Traffic Calming?



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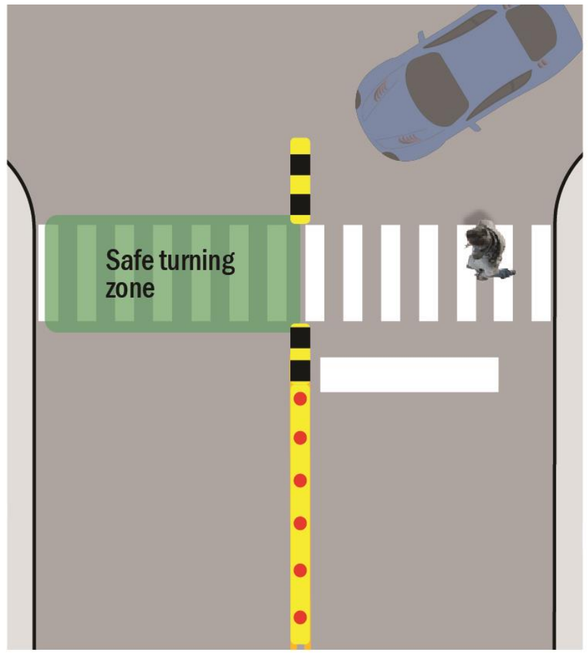


AFTER

Encourages drivers to take turns at slower speeds.

Improves drivers' visibility of pedestrians crossing the street.

Guides drivers to take a safer path when turning left.

LTTC Tool: Hardened Centerline

- **Treatment:** Rubber curb with plastic bollards often coupled with a rubber speed bump extending into the intersection.
- **Benefits:** Guides approaching drivers and requires a slower turn, decreases pedestrian exposure and improves visibility.

LTTC State Street Pilot, Chicago

LTTC Tool: Slow Turn Wedge

- **Treatment:** rubber speed bump in hashed-out area that reduces turn radius; can be paired with paint/post bump-outs.
- **Benefits:** Guides approaching drivers and requires a slower, tighter turn and mitigates visibility issues.

LTTC Citywide Deployment, Chicago

LTTC Outcomes - National

Chicago – State St

Findings

- Proportion of drivers yielding to pedestrians **rose 12%**

New York City, NY

Findings

- Left turn **speeds reduced 10-20%**
- Pedestrian injuries **reduced 20%**

Portland, OR

Findings

- Turning speeds **reduced by an average of 13%**

Washington, DC

Findings

- Left turn conflicts with pedestrians **reduced 70%**
- Speeds **reduced 10%**

LTTC Outcomes – Chicago State Street Pilot

Drivers are more likely to yield to people walking:

Before installation,

80%

of drivers yielded to pedestrians.

→

After installation,

95%

of drivers yielded to pedestrians.

Drivers take safer turning paths:

Before installation,

85%

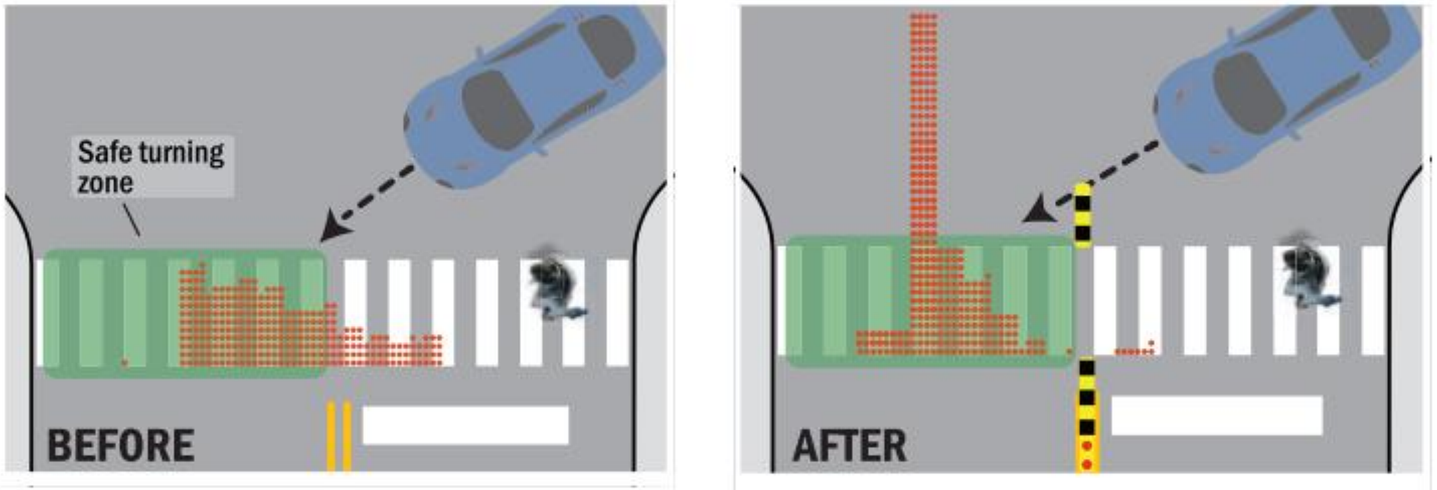
of drivers traveled through the safe turning zone.

→

After installation,

98%

of drivers traveled through the safe turning zone.



Frequency distribution of where drivers crossed the crosswalk (representational).

↓ **24%** reduction in left turn crashes

↓ **24%** reduction in total crashes

LTTC Outcomes – Chicago Citywide Deployment

Portion of drivers yielding to people walking:

73%
of interactions
before installations

→

94%
of interactions
after installations

Portion of drivers turning within the safe zone:

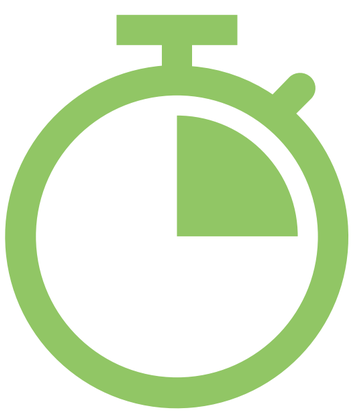
73%
before installations

→

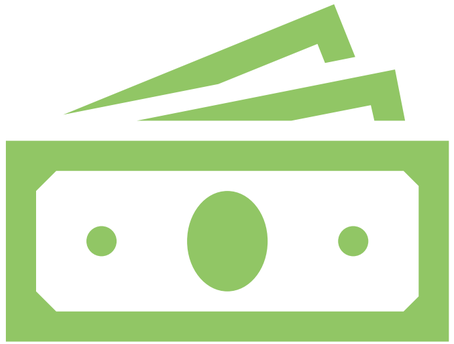
97%
after installations

> “I walk my dog across Ashland daily… With the [left turn traffic calming] improvements, I can safely step forward and look for oncoming vehicles. Also, because I am more visible crossing the street, vehicles are much more likely to slow down, and many even stop.”
>
> *Ravenswood resident, regarding LTTC installations at N Ashland Ave & W Sunnyside Ave*

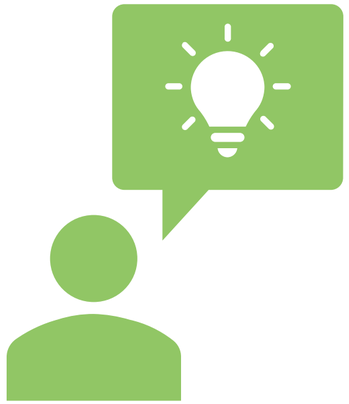
Why Choose Quick Builds?



Rapid Installation



Low Cost



Demonstration Opportunity

Unique Benefits

SS4A Eligible

THANK YOU!

Eric Hanss, Associate
eric.hanss@samschwartz.com

Making Streets Safer for Everyone

ANN ARBOR MOVING TOGETHER

TOWARDS VISION ZERO

Quick Build Street Projects

Quick Build projects:

- Slow traffic, making roads safer for everyone
- Test options before making permanent, expensive changes

LEARN MORE

Ann Arbor's Mobility Goals

Zero Deaths by 2025

No one dies or is seriously injured in crashes on Ann Arbor's streets

Carbon Neutrality by 2030

Our transportation system contributes zero emissions towards climate change.

ANN ARBOR
MOVING
TOGETHER
TOWARDS VISION ZERO

Tier 1 and Tier 2 Corridors and Intersections

Layers

Layer | Legend

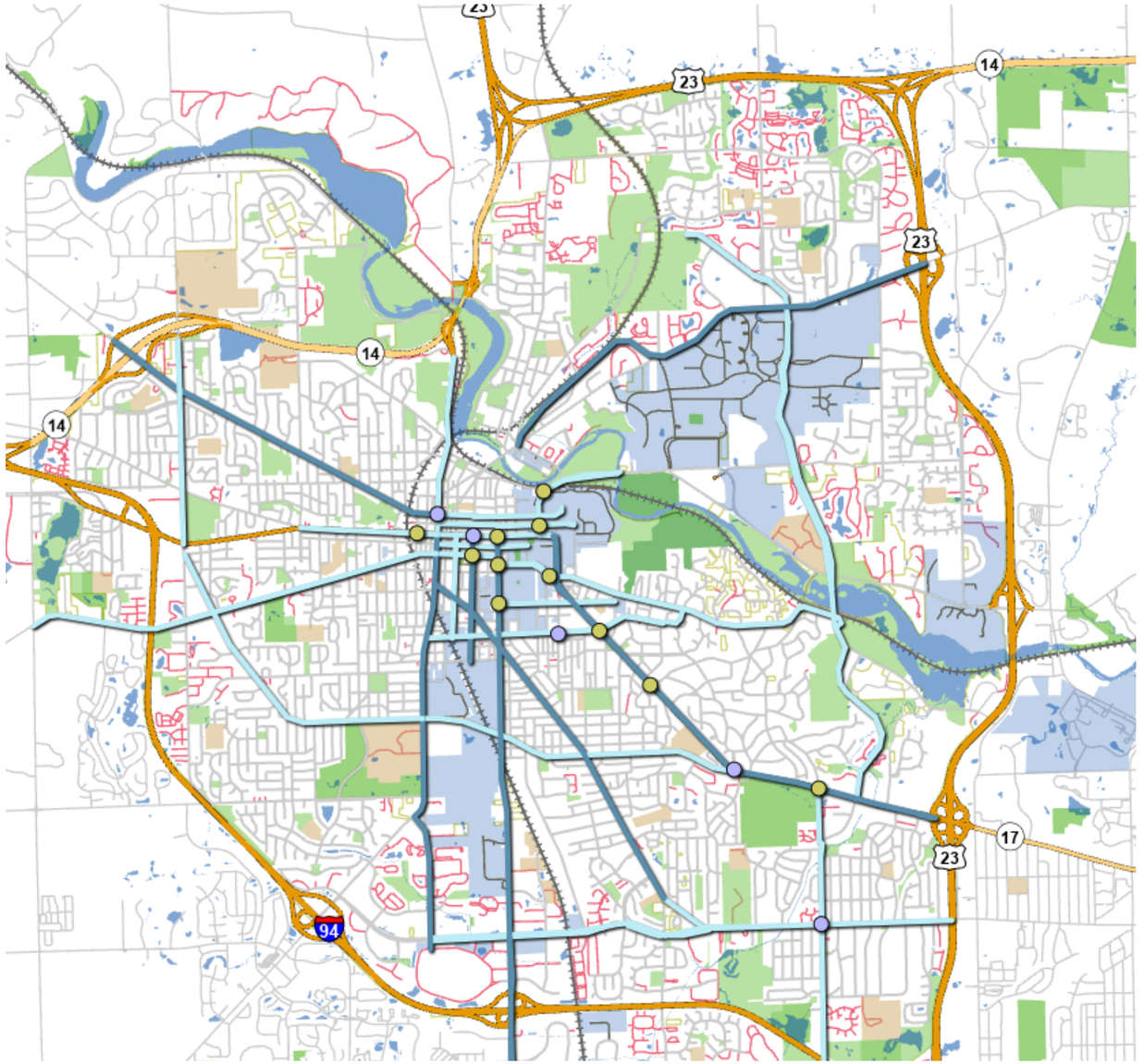
Transportation Plan

Focus Intersections

- 1
- 2

Focus Corridors

- 1
- 2



Addressing Dangerous Behaviors

Speed

Failure to Yield

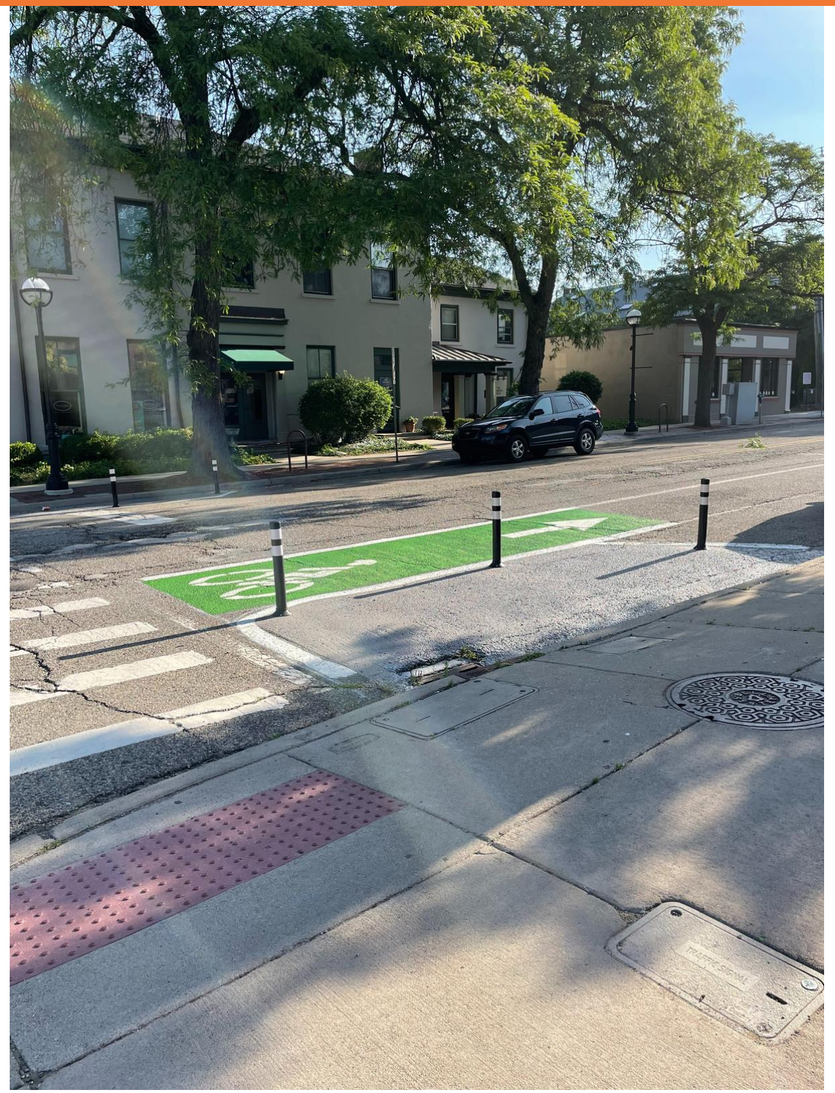
Impaired Driving

Disregarded traffic signs/signals

Reckless/careless driving

Vision Zero - Quick Builds

Ann Street



Ann Street

ANN ARBOR MOVING TOGETHER
TOWARDS VISION ZERO

Glen at Fuller

Liberty at Stadium

Maple at Miller

Packard

South University at State

Extending Existing Infrastructure

Division St. Cycletrack Extension

ANN ARBOR MOVING TOGETHER
TOWARDS VISION ZERO

We Don’t Always Hear From People Who Love Our Work

"I just wanted to express my gratitude for the line painting around the Dexter/Maple [...] I really appreciate the dotted bike lane markings through the intersections there! I know it's only paint, but it definitely makes me feel safer, especially when biking my daughter to and from preschool." - Ward 5 resident

Measuring Success

SEPTEMBER 2023 – 40,000 bicycle trips!

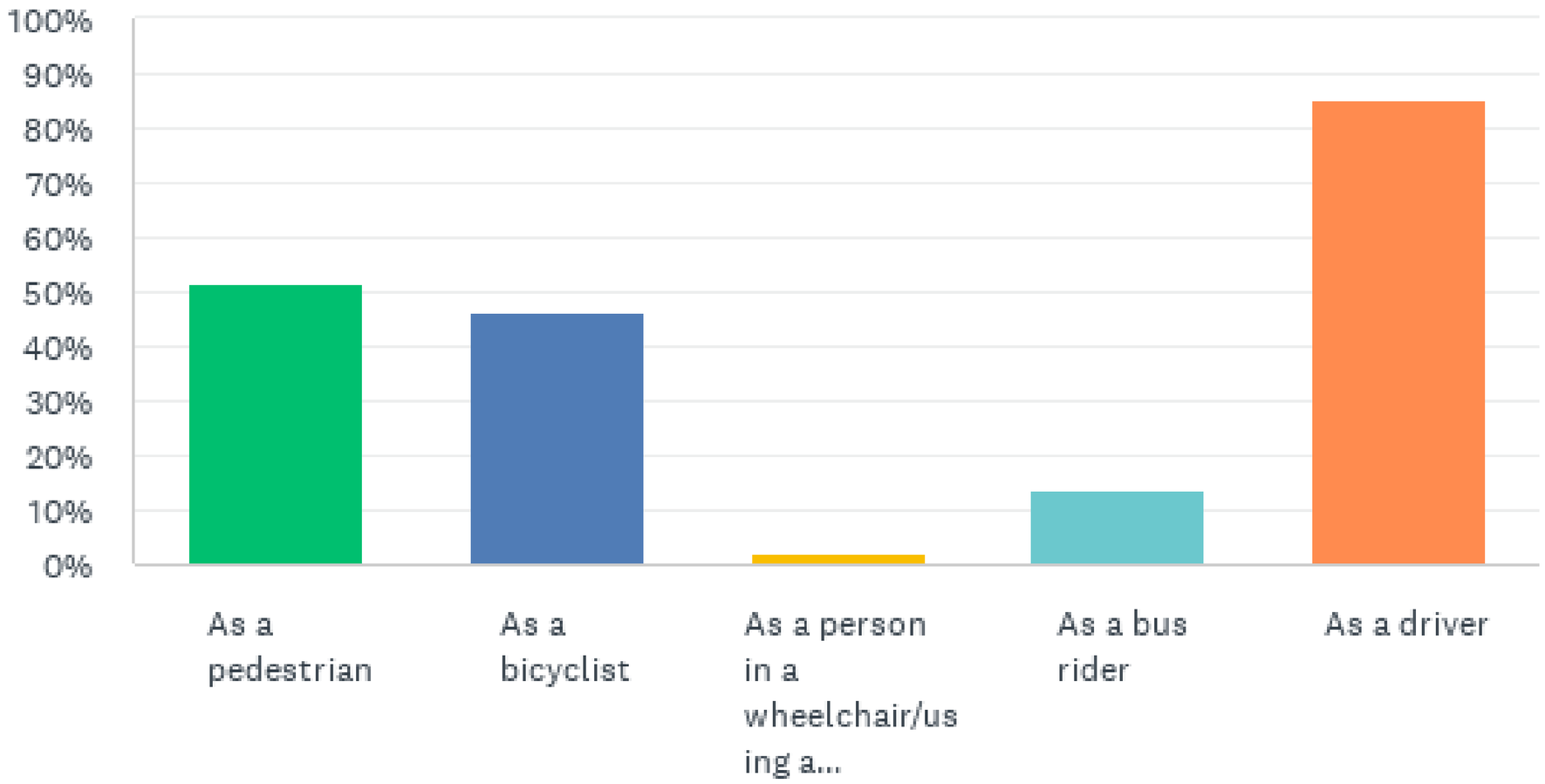
BIKEWAY	MONTHLY COUNT	WEEKLY AVERAGE	DAILY AVERAGE
WILLIAM @ THOMPSON	21,146	5,287	755
	High ridership steady since 2021		
DIVISION @ WASHINGTON	11,540	2,885	412
	240% Increase since construction		
CATHERINE @ FOURTH *	6,487	1,817	260
	152% Increase since construction		
TOTAL	39,173	9,989	1,427

*Not installed until Sept 5th

ANN ARBOR MOVING TOGETHER
TOWARDS VISION ZERO

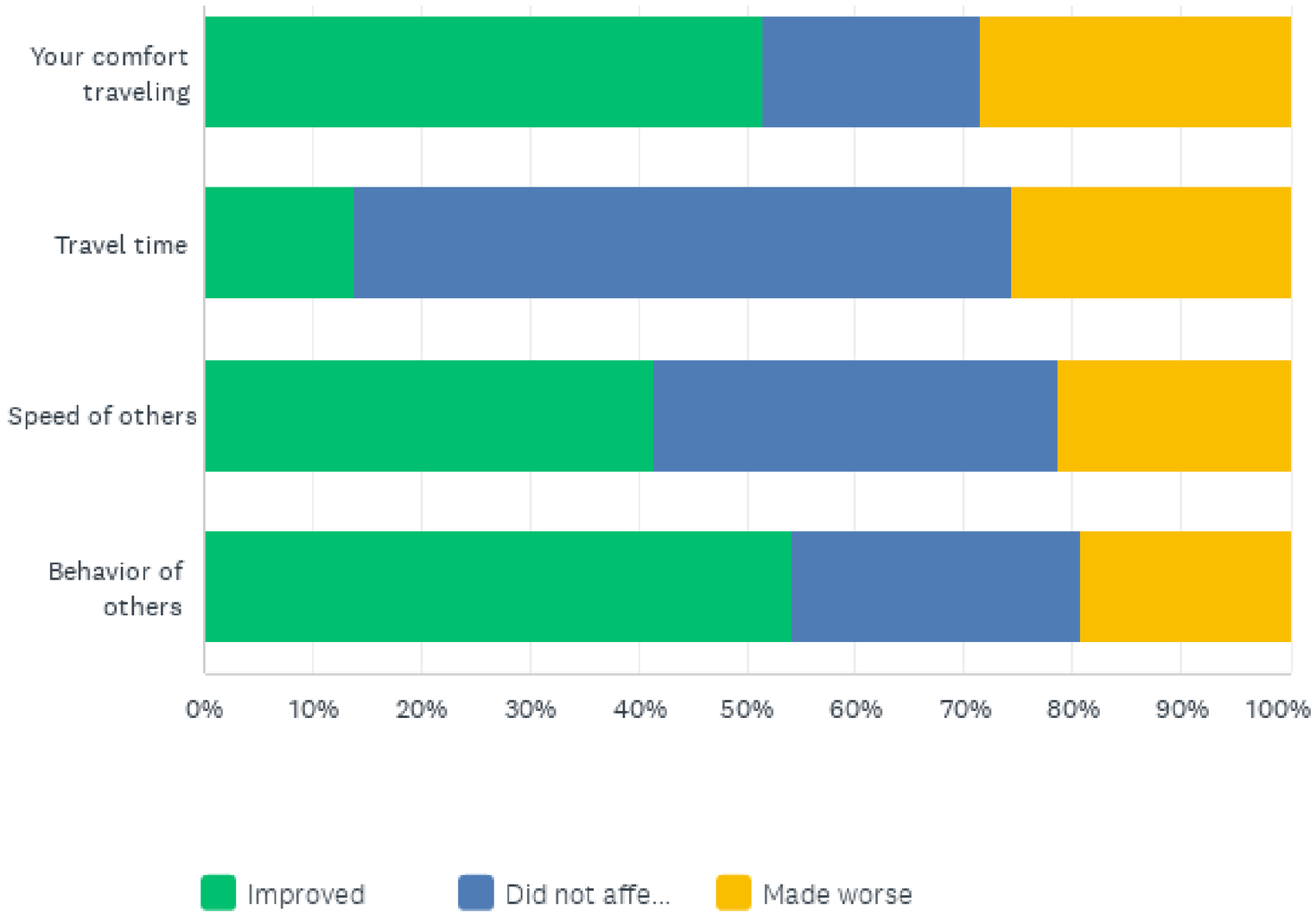
Measuring Success

Question 3 - How did you travel the Quick Build project(s)?



Measuring Success

Question 4 - How did the Quick Build Elements impact the following factors as you traveled?




NO
TURN
ON RED

Suzann Flowers
Transportation Program Manager
City of Ann Arbor
sflowers@a2gov.org

Let’s Try It Out!
MnDOT’s Active Transportation Demonstration Projects

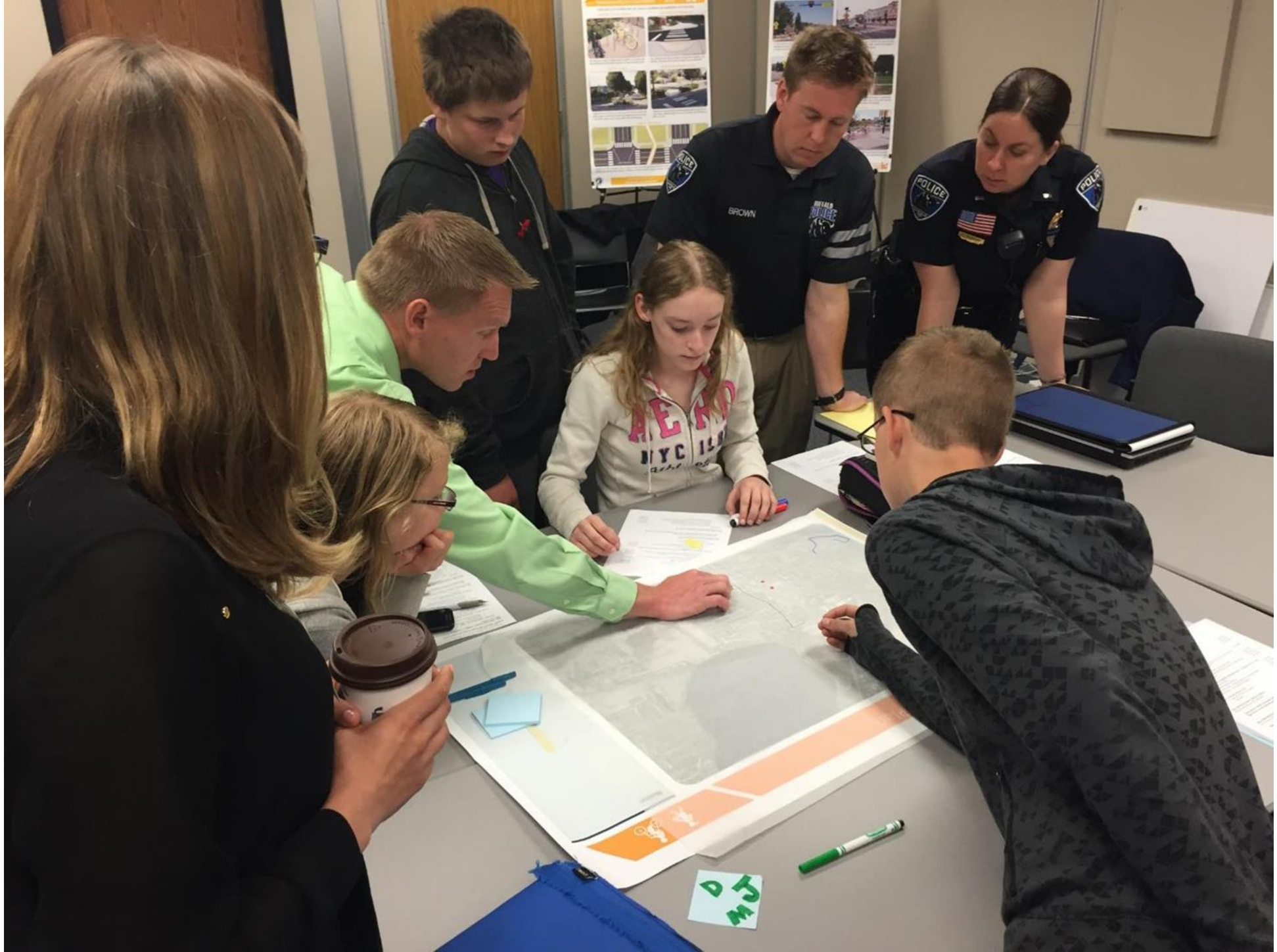
Safe Routes PARTNERSHIP
Active Paths for Equity & Health

Dave Cowan, Director of Consulting and Program Support
Safe Routes Partnership
January 26, 2023

Context Setting: SRTS in Minnesota

- Safe Routes to School in Minnesota
- Piloting Demo Projects
- How Minnesota began implementing widespread Demonstration Projects
- What's next?

SAFE ROUTES PARTNERSHIP


POLICE
BROWN
POLICE
POLICE


LEGENDARYTV.COM

School

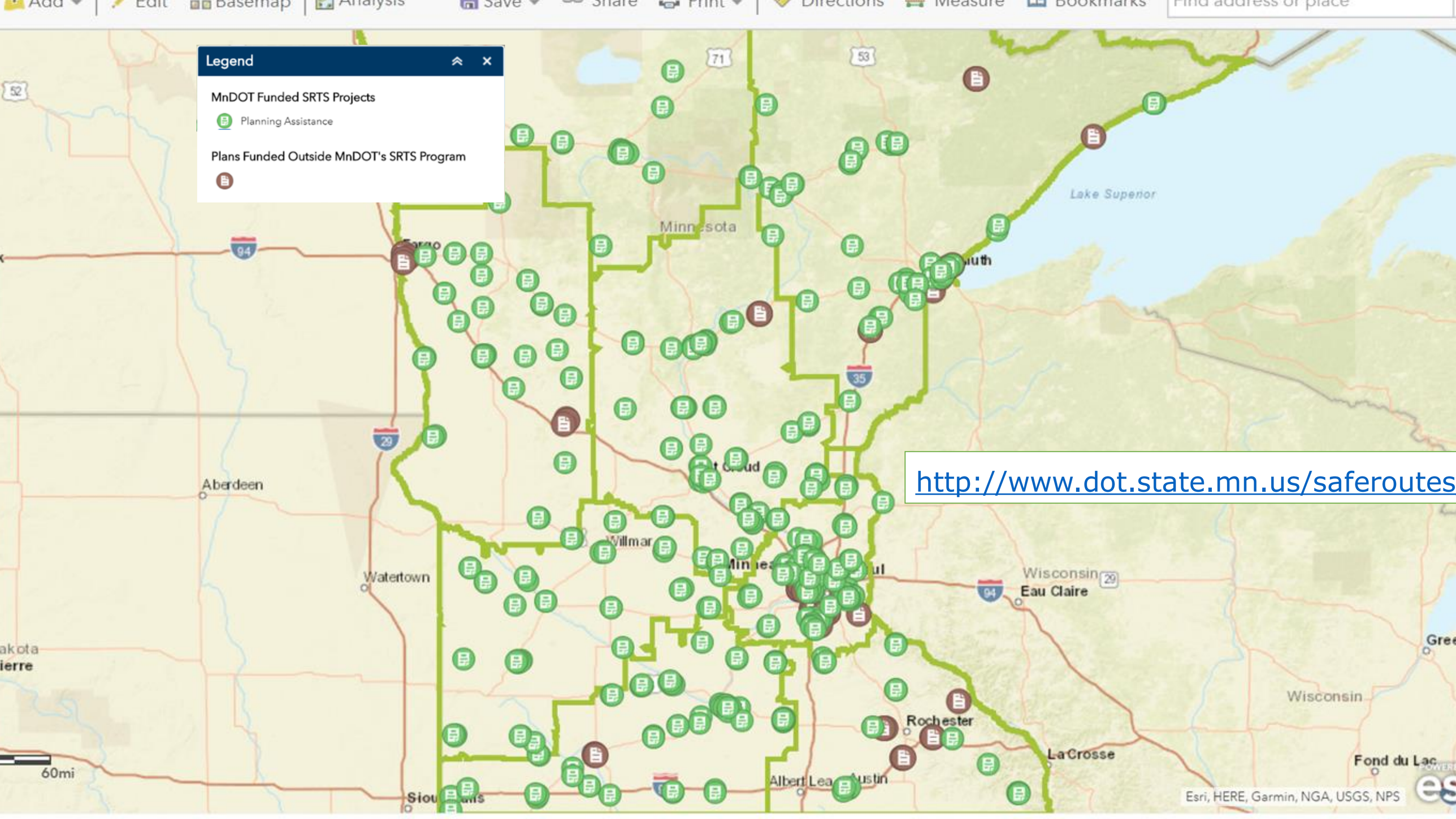
- Principal/administrators
- Parents and students
- Teachers (SPeD too)
- PTA/PTO representative
- School nurse
- School district transportation director
- School improvement team
- **Adult school crossing guards**

Community

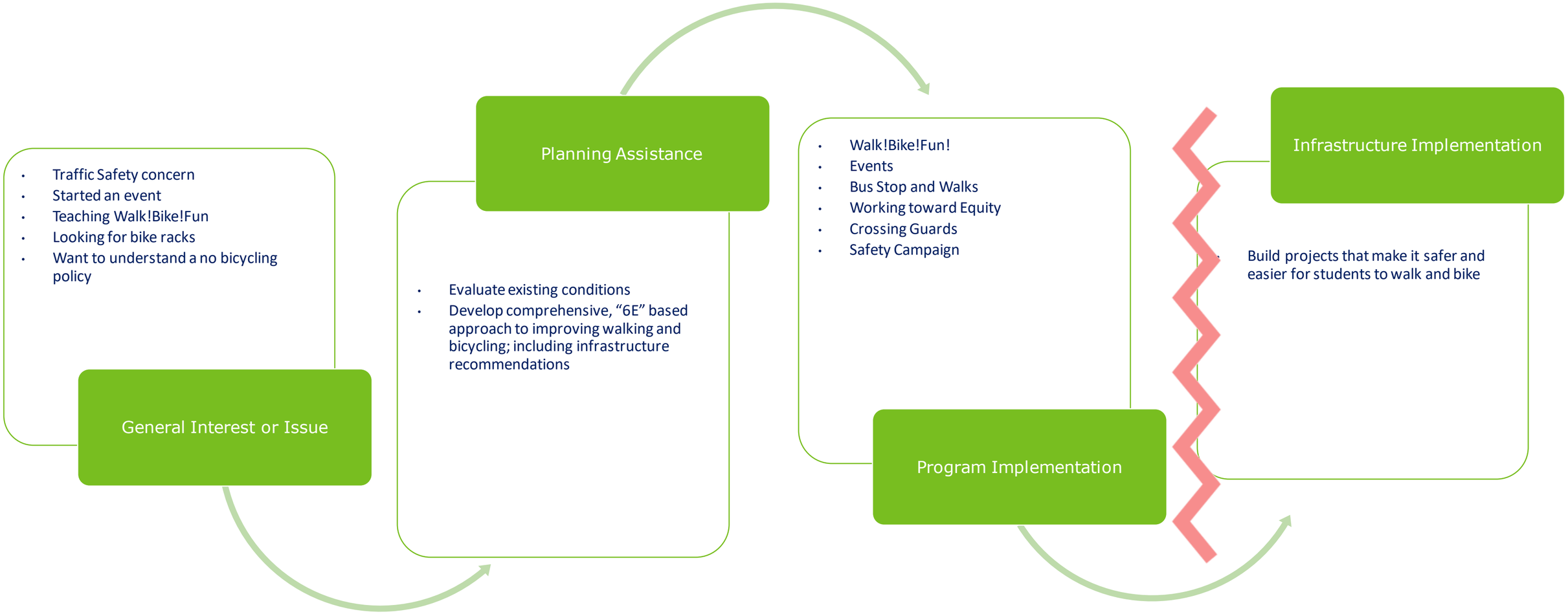
- Community members
- Neighborhood or community association members
- Local businesses
- Local pedestrian, bicycle and safety advocates
- Groups representing people with disabilities

Gov.

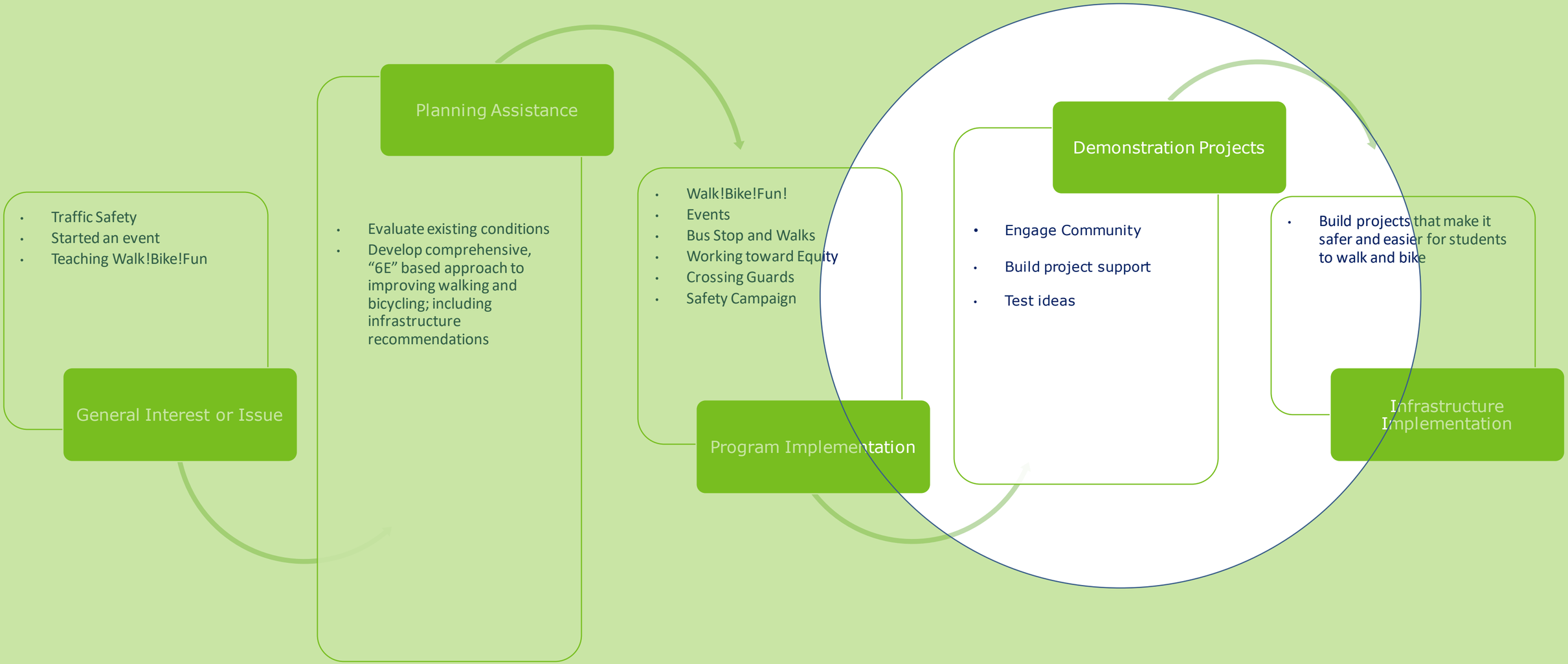
- Mayor's office or council member
- Transportation or traffic engineer
- Local planner
- Public health professional
- Public works representative
- Law enforcement officer
- Pedestrian and bicycle coordinator


Legend
MnDOT Funded SRTS Projects
Planning Assistance
Plans Funded Outside MnDOT's SRTS Program
http://www.dot.state.mn.us/saferoutes
Lake Superior
Minnesota
Aberdeen
Watertown
Willmar
Wisconsin
Eau Claire
Rochester
La Crosse
Albert Lea
Austin
Fond du Lac
60mi
Esri, HERE, Garmin, NGA, USGS, NPS

Minnesota Safe Routes to School Continuum



Minnesota Safe Routes to School Continuum



What is a demonstration project?

- Short term, low-cost, temporary roadway projects
- Pilot and evaluate long-term design solutions to improve walking, bicycling and public spaces
- Examples: bicycle lanes, crosswalk markings, curb extensions, and median safety islands

Why consider a demonstration project?

- Evaluate a project before investing in more expensive and long term materials
- Inspire action and build support
- Develop public awareness of conceptual design options
- Increase public engagement by inviting stakeholders to try new infrastructure treatments

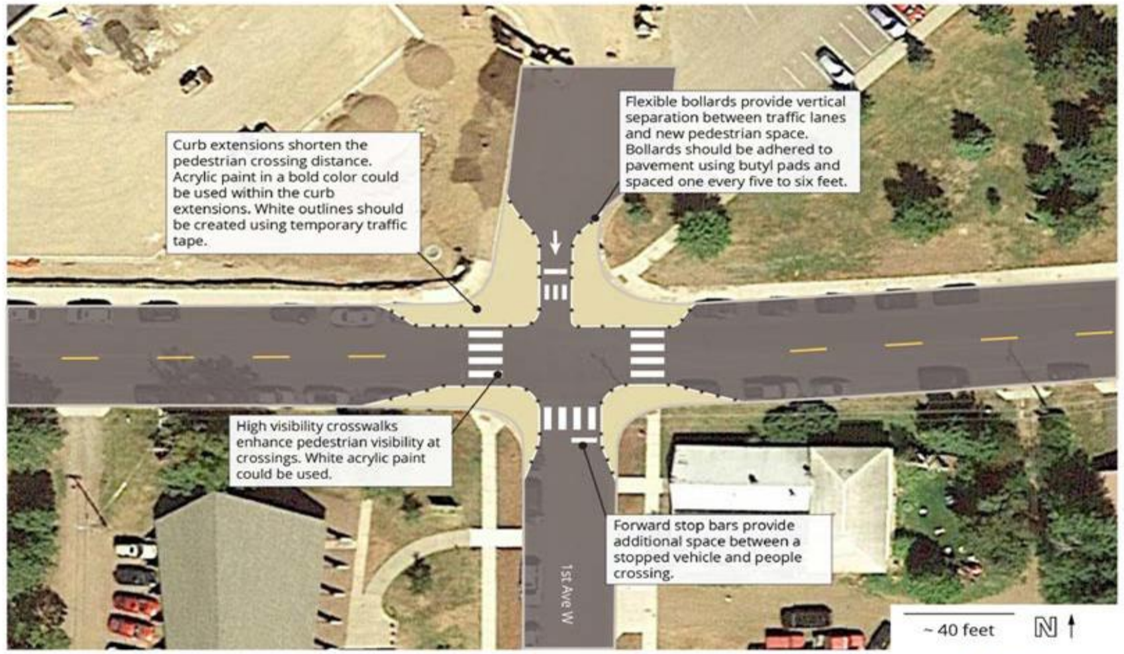
Why consider a demonstration project?

- Increase understanding of active transportation needs in the community
- Strengthen relationships between government agencies, schools/districts, elected officials, non-profit organizations, local businesses, and residents
- Gather data from real-world use of streets and public spaces

What isn’t a demonstration project?

- Public health partners intent
- Local road authority interpretation
- Ultimate goal being achieved

Pilot Project: Grand Marais, MN



Proposed Demonstration Project Improvements
County Road 7 & 1st Ave W - Grand Marais, MN
MnDOT SRTS Demonstration Projects, Spring 2018

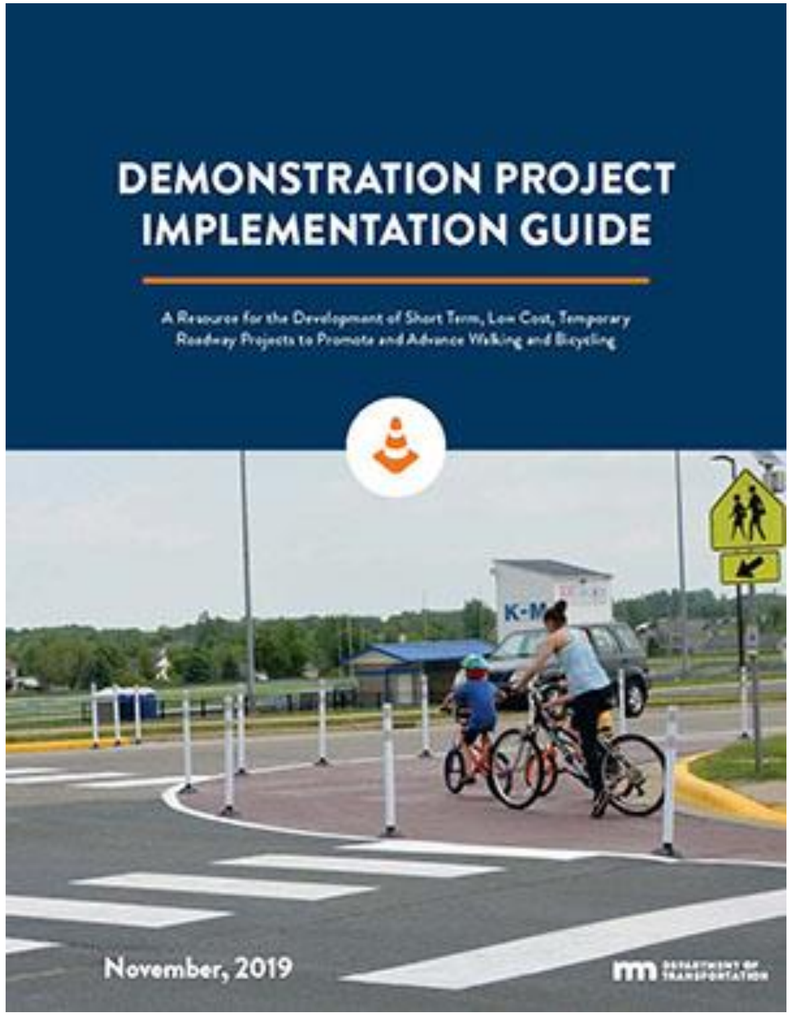
Proposed Demonstration Project Improvements
Parking lot, Cook County YMCA - Grand Marais, MN
MnDOT SRTS Demonstration Projects, Spring 2018

Grand Marais Lessons Learned

Learning from Mistakes

- Grand Marais Project backlash – pilots to guidance
- Engaged all partners (including RA) in all steps of the process (pg 10, 11 of demonstration project guide)
- More specific guidance on material selection
- Formation of TAC to provide oversight for developing guidance and implementing projects

What is the purpose of the Demonstration Project Guide?



- Addresses the issue of permissions, process, and decision making at the policy level but also provides:
  - Guidance on engaging stakeholders
  - Process for identifying a location
  - Process for developing a design concept
  - Descriptions of typical demonstration projects and what types of issues they address
  - Guidance on types of evaluation to perform

Process Recommendation from Demonstration Project Guide

6 MONTHS | 3 MONTHS | 2 MONTHS | 1 MONTH | PROJECT IN PLACE | 2 WEEKS

Planning and installation checklist

The following checklist provides an at-a-glance understanding of key steps for a successful demonstration project. Additional details, considerations, and resources to support project identification, planning, design, implementation, and evaluation are provided later in this guide.

Building the team *(see Chapters 3 & 4)*

AT LEAST SIX MONTHS BEFORE INSTALLATION

- ☑ Assemble community and agency stakeholders including the road authority if project sites have been identified.
- ☑ Convene Visioning Meeting to:
  - → Review relevant plans & studies.
  - → Determine additional existing information to be collected.
  - → Identify potential project sites, their issues, and why a project is needed.
  - → Review project types that may address the issues.
  - → Identify road authority for potential sites, if not already involved.
  - → Discuss additional stakeholders to include.
  - → Discuss what a successful outcome will look like.
- ☑ Refine potential project site list, as needed.

Choosing a site and selecting a project type *(see Chapter 4)*

AT LEAST THREE MONTHS BEFORE INSTALLATION

- ☑ Convene Project Development Workshop to:
  - → Introduce project to workshop participants.
  - → Visit and evaluate potential project sites.
  - → Select a preferred project site based on selection criteria.
  - → Build consensus around problems and potential solutions at project site.
  - → Discuss public engagement needs/plan.
  - → Discuss potential demonstration project types that address goals and needs at the selected site.
  - → Discuss duration and potential evaluation strategies.
  - → Discuss permitting requirements.
- ☑ Confirm support from road authority and identify permitting needs.
- ☑ Sketch initial project layout in coordination with road authority.
- ☑ Draft installation plan in coordination with road authority.
- ☑ Identify necessary project materials, quantities, costs and vendors in coordination with road authority.

HOW TO PICK A SITE

Teams leading demonstration project installations need to consider several questions when choosing a site for a demonstration project. For example, has there been any previous planning or support for a project at that location? Are the physical characteristics of the site appropriate for a demonstration project? Has the site been evaluated to identify issues for people walking and biking? The MnDOT School Hazard Observation Tool is a free resource that helps identify critical safety issues in the immediate area surrounding a school. Chapter 4 includes information about site selection and project types.

ADA COMPLIANCE

The Americans with Disabilities Act (ADA), enacted on July 26, 1990, is a civil rights law prohibiting discrimination against individuals on the basis of disability. Along roadways, ADA is most commonly applied through the use of curb ramps that allow people using mobility devices to easily move from the sidewalk into the roadway at a crosswalk and tactile warning strips that help visually impaired people identify a crossing location. Demonstration projects should not remove or reduce access for people using mobility devices; they should improve access if possible.

Planning and design *(see Chapter 5)* and conducting evaluation *(see Chapter 6)*

ONE TO TWO MONTHS BEFORE INSTALLATION

Coordinate with the Road Authority on their involvement in each of the following steps.

- ☑ Refine project layout, installation plan, removal plan, and materials as needed.
- ☑ Determine need for Temporary Traffic Control during installation and removal.
- ☑ Consider emergency, maintenance and transit vehicle access.
- ☑ Procure project materials for installation.
- ☑ Seek support from residents and business owners on the block adjacent to the project area.
- ☑ Define evaluation strategies and develop data collection methods and materials.
- ☑ Identify people to assist with data collection, outreach, and project installation/removal.
- ☑ Create educational and promotional materials to share with project partners and supporters.

APPROXIMATELY ONE MONTH BEFORE INSTALLATION

- ☑ Develop detailed plan/timeline for project installation and removal highlighting material transport and arrival, temporary traffic control timing (if needed), set-up of project elements, programming and evaluation activities, volunteer shifts, and site inspection.
- ☑ Submit applications for permits to the road authority, if needed.
- ☑ Create Temporary Traffic Control Plan in coordination with road authority, if needed.
- ☑ Conduct outreach to residents, business owners, and other stakeholders near the project.
- ☑ Conduct baseline data collection.

COMMUNICATION

Frequent and consistent communication with people who travel through the project area about what the project is for, how long it will last and what happens once it is removed is critical to the success of a demonstration project.

Installing, maintaining, and removing the project *(see Chapter 7)*

- ☑ Notify residents and business owners near the project of installation impacts.
- ☑ Install project per agreed upon concept, materials, and build-day timeline, and in compliance with safety, permitting, and traffic control requirements, per the road authority.
- ☑ Document the installation and final product with photos and videos.
- ☑ Conduct data collection while project is in place, using the same tools and methodology as the baseline data collection.
- ☑ Conduct field visits and site maintenance as determined necessary by the local road authority.
- ☑ Prepare for removal of the demonstration project; create a Traffic Control Plan in coordination with road authority, if needed.
- ☑ Remove the demonstration project according to the agreed upon project timeline, and inform people who travel within the project site of changes to the roadway.

Following up *(see Chapter 8)*

WITHIN APPROXIMATELY TWO WEEKS OF REMOVAL

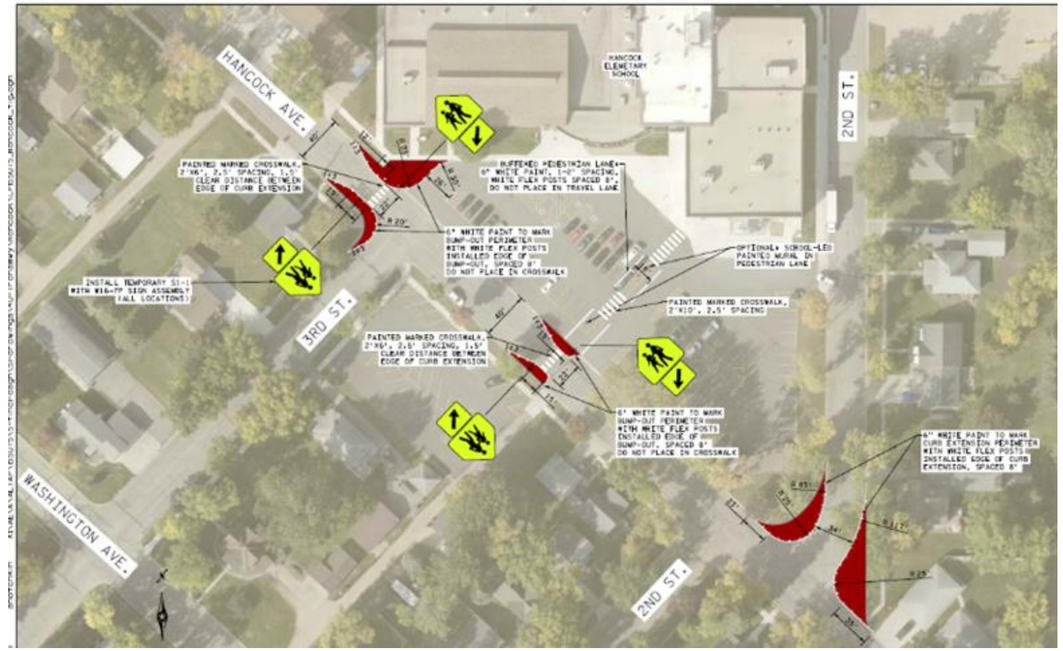
- ☑ Convene the core planning team, including the road authority, for a project debrief.
- ☑ Compile input from residents, businesses, and other stakeholders.
- ☑ Develop and share evaluation summary with core team and partners.
- ☑ Summarize lessons learned and determine next steps.

MN MUTCD COMPLIANCE

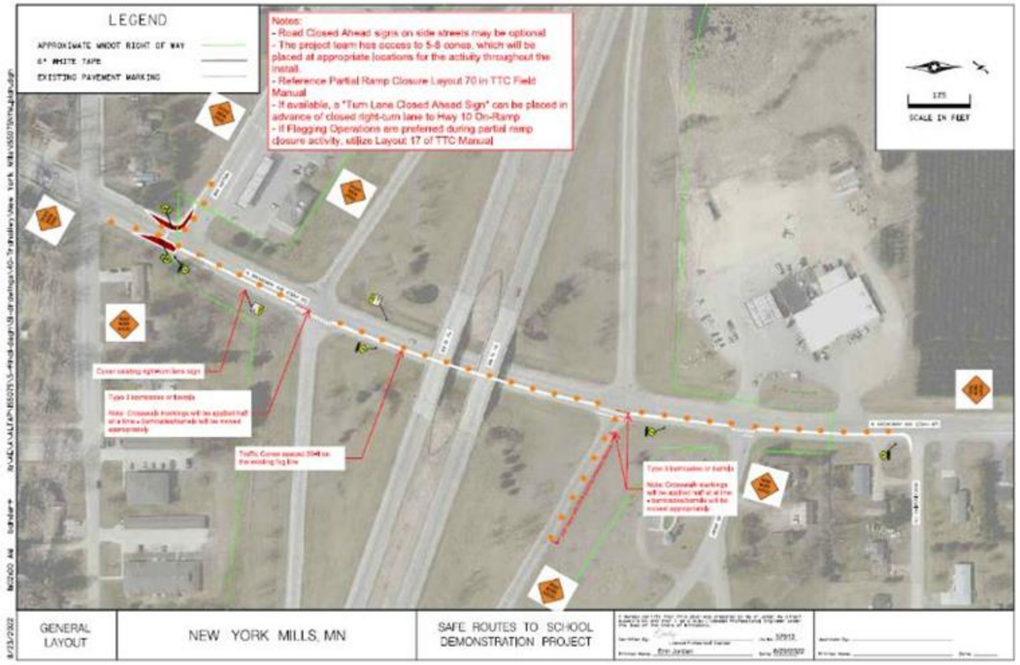
The Minnesota Manual on Uniform Traffic Control Devices include required design and safety standards for streets. These standards are applicable to all roads in Minnesota that are open to the public and are updated periodically. Consult the current MN MUTCD when selecting the site and project type.

Example Projects!

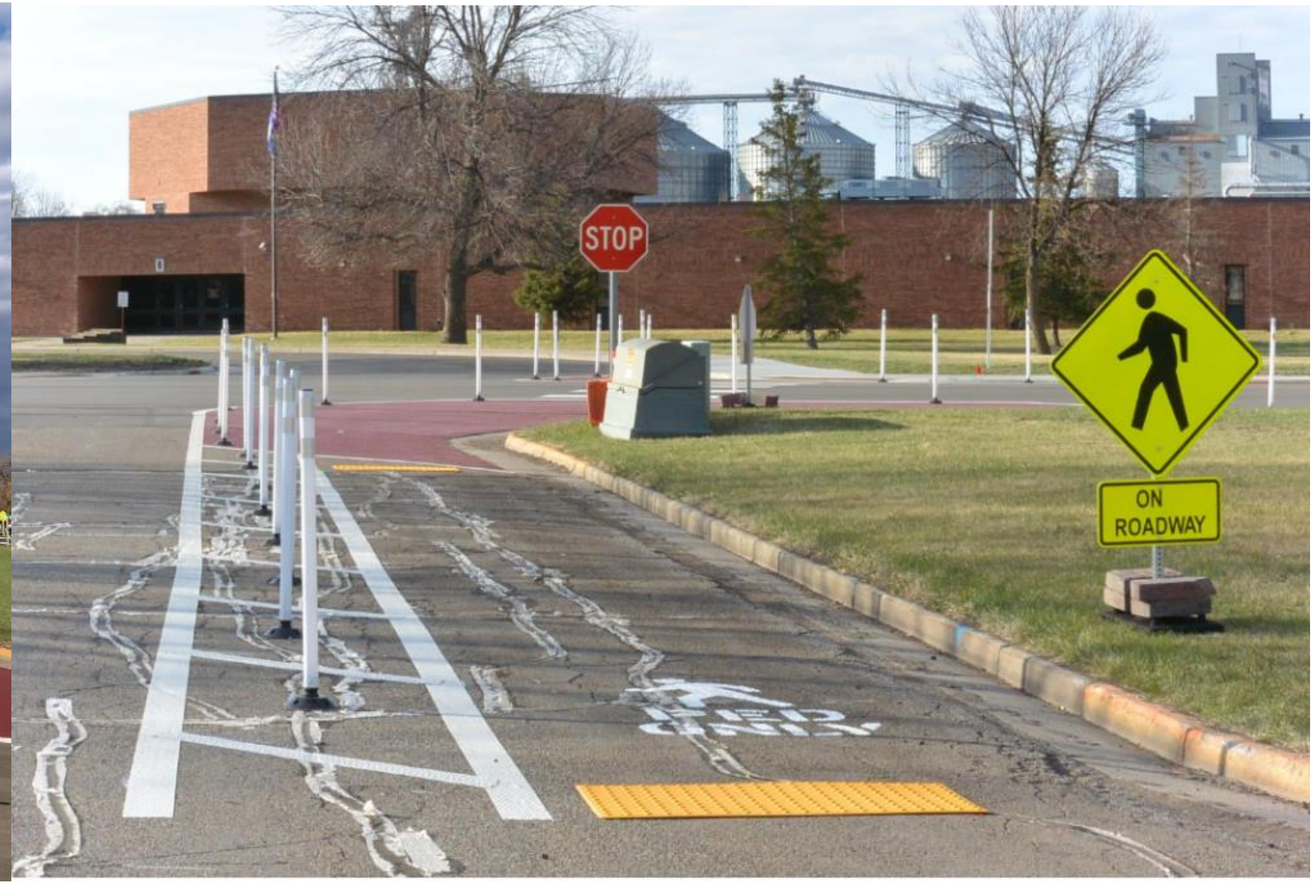
Hancock, MN


HANCOCK AVE.
HANCOCK ELEMENTARY SCHOOL
2ND ST.
3RD ST.
WASHINGTON AVE.
PAINTED MARKED CROSSWALK, 2'X6', 2.5' SPACING, 1.5' CLEAR DISTANCE BETWEEN EDGE OF CURB EXTENSION
BUFFERED PEDESTRIAN LANE
6" WHITE PAINT, 1'-0" SPACING, 10 WHITE FLEX POSTS SPACED 8', DO NOT PLACE IN TRAVEL LANE
6" WHITE PAINT TO MARK BUMP-OUT PERIMETER WITH WHITE FLEX POSTS INSTALLED EDGE OF BUMP-OUT, SPACED 8', DO NOT PLACE IN CROSSWALK
OPTIONAL* SCHOOL-LED PAINTED MURAL IN PEDESTRIAN LANE
PAINTED MARKED CROSSWALK, 2'X10', 2.5' SPACING
INSTALL TEMPORARY SIGN WITH W16-7P SIGN ASSEMBLY (ALL LOCATIONS)
PAINTED MARKED CROSSWALK, 2'X6', 2.5' SPACING, 1.5' CLEAR DISTANCE BETWEEN EDGE OF CURB EXTENSION
6" WHITE PAINT TO MARK BUMP-OUT PERIMETER WITH WHITE FLEX POSTS INSTALLED EDGE OF BUMP-OUT, SPACED 8', DO NOT PLACE IN CROSSWALK
6" WHITE PAINT TO MARK CURB EXTENSION PERIMETER WITH WHITE FLEX POSTS INSTALLED EDGE OF CURB EXTENSION, SPACED 8'

New York Mills, MN

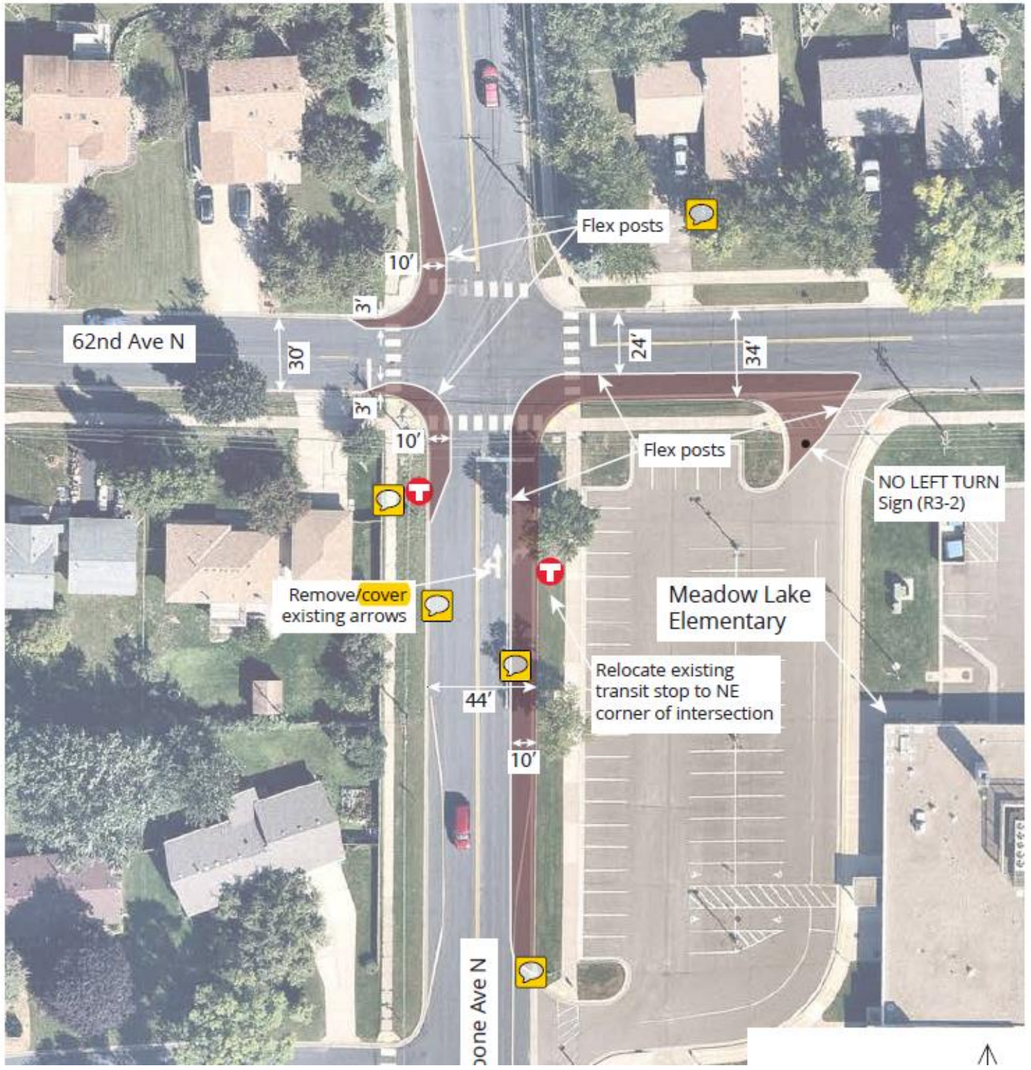


Warren, MN

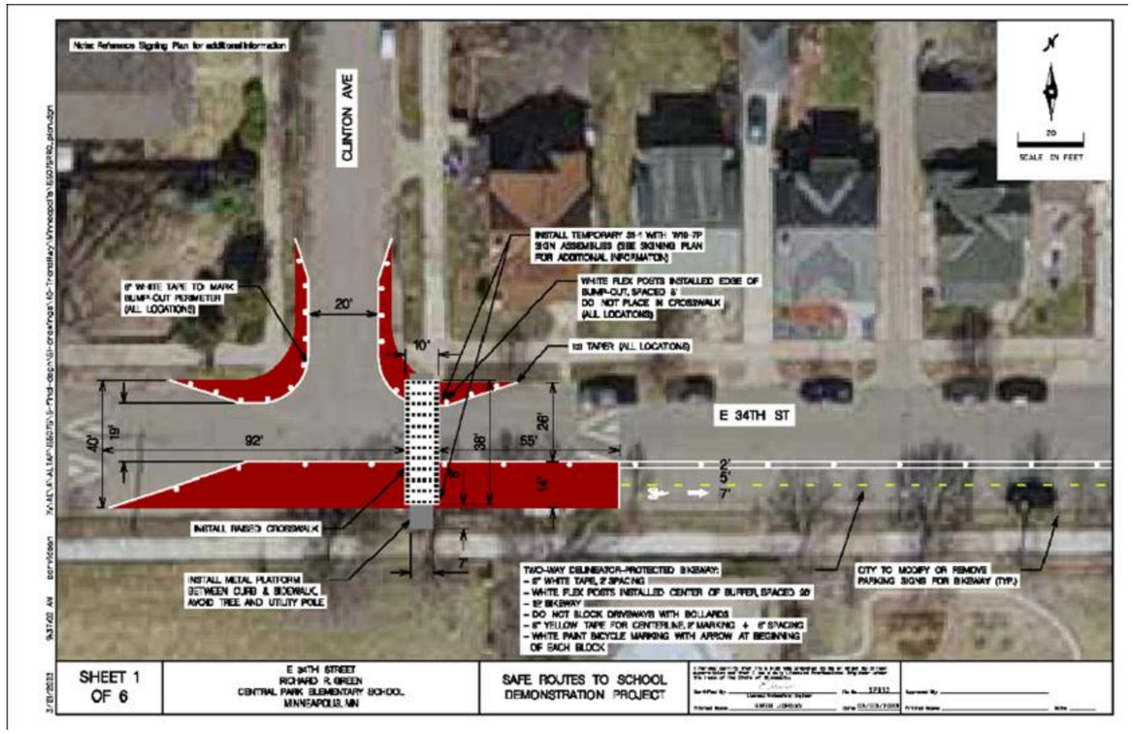


Fond du Lac, MN

New Hope, MN

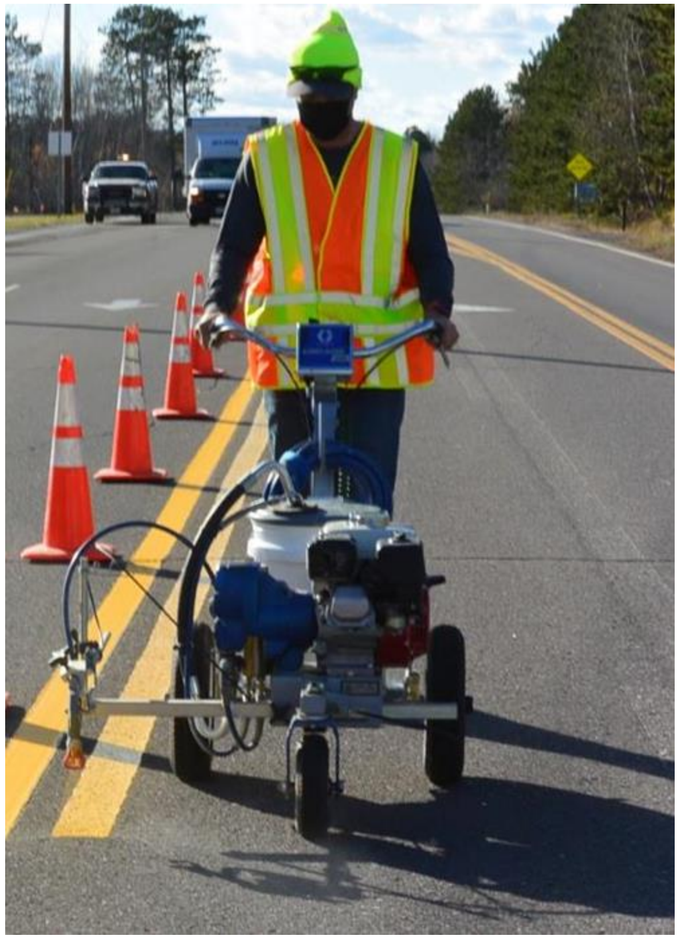

Flex posts
10′
3′
62nd Ave N
30′
24′
34′
3′
10′
Flex posts
NO LEFT TURN
Sign (R3-2)
Remove/cover
existing arrows
Meadow Lake
Elementary
Relocate existing
transit stop to NE
corner of intersection
44′
10′
one Ave N

Green Central Elementary, Minneapolis



Lessons for Consideration

- Go where the plans are
- Engage!
- Evaluate!
- Take photos (document)
- Celebrate!
- Iterate the Process




HAZARDOUS MATERIALS
PROHIBITED FROM
EAST 94 TUNNEL
N Bryant Av

See more project examples here:
http://tinyurl.com/mndotdemoprojects

Safe Routes
PARTNERSHIP
Active Paths for Equity & Health

Questions?

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Consulting and Program Support Director
Safe Routes Partnership
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